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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,431

11/14/2006

Patrick Lenoir

016782-0364

1731

22428 7590 11/13/2009  
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EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT

PAPER NUMBER

3743

MAIL DATE

DELIVERY MODE

11/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/591,431	LENOIR, PATRICK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Stephen M. Gravini	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>200907014</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 112***

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In that claim, it is recited "wherein a vector average of projections in a plane perpendicular to said web and stretching out in the transverse direction of said web, as a component parallel to the web that is smaller than said maximum web width of said web, said vectors representing respective trajectories of different jets sucked and/or blown combustion products" is construed to not be enabling. First, the specification is not clear as to the vector average of projections, because it is not clear what is intended to be claimed as "projections." Second, the earlier claim recitation "at least part of combustion products" and later claimed "respective trajectories of different jets sucked and/or blown combustion products" does not enable one skilled in the art to make and/or use the invention because it is not clear which part of the combustion product trajectory is claimed. Finally, "a vector average" is claimed but later "said vectors" is claimed is construed to be not enabling because it is not clear which vector is intended to be recited as the claimed invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. That claim recites “a vector average” and later recites “said vectors” which is construed to be indefinite because the later recitation lacks a positive antecedent basis.

***Claim Rejections - 35 USC § 102***

Claims 1-2, 4-7, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wennerberg (US 4,653,396). The claims are reasonably and broadly construed, in light of the accompanying specification, to be disclosed by Wennerberg, as comprising:

radiant elements **20, 120, 221, 338** configured to radiate said web arranged in at least one row stretching out in a transverse direction to a substantially entire maximum web width (figures 1, 2, 3), and

at least a transversal convective system **24, 124, 316** equipped with suction and blowing devices configured to suck at least part of combustion products produced by said radiant elements by a suction duct and configured to blow said part of the combustion products towards said web by a blowing duct, wherein said suction and blowing ducts stretch out in the transverse direction of said web,

said convective system comprising at least a mixing device **18** installed opposite of the web in relation to corresponding suction and blowing ducts, wherein the mixing device is arranged so as to suck and/or blow said at least part of the combustion products, said sucked and/or blown at least part of the combustion products comprising

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different jets, wherein respective trajectories of the different jets are presented by vectors, wherein a vector average of projections of the vectors in a plane perpendicular to said web and stretching out in the transverse direction of said web, has a component parallel to the web that is smaller than said maximum web width of said web (figures 1, 2, 3). Wennerberg also discloses the claimed component parallel to the web is smaller than approximately half of said maximum web width of the web (figures 1, 2, 3), wherein each mixing device and the corresponding blowing duct are arranged so that the vectors representing the respective trajectories of the different jets of combustion products blown on said web have, in projection to a plane perpendicular to the web and stretching out according to a median longitudinal axis of said web, a component that is not null (column 4 lines 49-68), wherein each mixing device and the corresponding suction and blowing ducts are arranged so that the vectors representing the respective trajectories of the different jets of sucked and/or blown combustion products are distributed in a substantially symmetrical way in relation to a plane perpendicular to said web and stretching out according to a median longitudinal axis of said web (figures 1, 2, 3), wherein said convective system includes at least one suction duct that stretches out at least in the transverse direction of the web, and at least one blowing duct that stretches out at least in the transverse direction of the web, wherein the suction duct and the blowing duct are separated from one another by a common wall (column 3 lines 39-57), wherein said common wall is equipped with devices configured to advance thermal exchanges between the sucked combustion products and the blown combustion products (column 4 lines 18-37), and at least two transversal convective

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systems arranged one after the other in a passing direction of the web and separated one from the other by at least one transversal row of the radiant elements (figures 1, 2, 3).

***Claim Rejections - 35 USC § 103***

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerberg. Wennerberg discloses the claimed invention, as rejected above, except for the claimed feature wherein each mixing device is arranged in such a way that the vector average, wherein the vector average is an average of vectors representing the respective trajectories of different jets of sucked and/or blown combustion products by each of said mixing devices, of projections in a plane perpendicular to the web and stretching out in the transverse direction of said web is substantially perpendicular to said web or substantially null. It would have been an obvious matter of design choice to recite a particular vector directional representation, since the teachings of Wennerberg would perform the invention, as claimed regardless of the vector plane projection.

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerberg in view of Joiner (US 5,416,979). Wennerberg discloses the claimed invention, as rejected above, except for the claimed feature wherein said transversal convective system has a first exterior casing for suction of said combustion products, wherein said first exterior casing has in a longitudinal cross-section according to a plane perpendicular to said web and stretching out according to a median longitudinal axis of said web a substantially U-shaped cross-section with an opening towards the web, wherein said U-shaped first exterior casing substantially stretches out in the transverse

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direction of the web, wherein said transversal convective system has a second internal casing inside the first external casing for blowing said combustion products, wherein said second internal casing has a wall with a substantially U-shaped longitudinal cross-section with an opening towards the web, wherein said second internal casing stretches out in the transverse direction of the web inside said first external casing, wherein the U-shaped wall of the second internal casing has several first openings, wherein a device to blow air under pressure is arranged substantially in an axis of each first opening so as to create a Venturi effect, so as to suck at least a part of the combustion products and to blow them towards the web, wherein the U-shaped wall of the second internal casing has several second openings stretching out in the transverse direction of the web, wherein a cylindrical rotor with radial blades rotating around an axis parallel to the web, said axis being substantially perpendicular to a passing direction of the web, is installed on an interior side of the first external casing in front of each of the second openings, wherein the first or second openings are made in a tube formed by a wall of the transversal convective system that is substantially parallel to the web. Joiner, another web dryer, discloses that feature at column 2 line 55 through column 5 line 58 and shown in figure 2. It would have been obvious to one skilled in the art to combine the teachings of Wennerberg with the feature wherein said transversal convective system has a first exterior casing for suction of said combustion products, wherein said first exterior casing has in a longitudinal cross-section according to a plane perpendicular to said web and stretching out according to a median longitudinal axis of said web a substantially U-shaped cross-section with an opening towards the web,

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wherein said U-shaped first exterior casing substantially stretches out in the transverse direction of the web, wherein said transversal convective system has a second internal casing inside the first external casing for blowing said combustion products, wherein said second internal casing has a wall with a substantially U-shaped longitudinal cross-section with an opening towards the web, wherein said second internal casing stretches out in the transverse direction of the web inside said first external casing, wherein the U-shaped wall of the second internal casing has several first openings, wherein a device to blow air under pressure is arranged substantially in an axis of each first opening so as to create a Venturi effect, so as to suck at least a part of the combustion products and to blow them towards the web, wherein the U-shaped wall of the second internal casing has several second openings stretching out in the transverse direction of the web, wherein a cylindrical rotor with radial blades rotating around an axis parallel to the web, said axis being substantially perpendicular to a passing direction of the web, is installed on an interior side of the first external casing in front of each of the second openings, wherein the first or second openings are made in a tube formed by a wall of the transversal convective system that is substantially parallel to the web, of Joiner, for the purpose of providing a rounded and encompassed cross section to more effectively and efficiently dry a web.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerberg in view of Cirrito (4,146,361). Wennerberg discloses the claimed invention, as rejected above, except for the claimed feature wherein said convective system at least has one turbine, an axis of which is substantially perpendicular to the



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web, wherein each turbine has a centrifugal turbine wheel of which a suction opening is connected to an upstream transversal suction duct in relation to the web, wherein sucked combustion products are blown through two tangential outlet openings substantially directly opposite in the transverse direction of the web and connected to the transverse blowing duct adjacent to the suction duct, wherein said convective system has at least two turbines arranged in a row stretching out in the transverse direction of the web, wherein each turbine cooperates with a corresponding suction and blowing duct stretching out transversally along a respective part of the width of the web. Cirrito, another web device, discloses that feature at column 4 lines 5-59 and shown in figures 1-9 and 12-13. It would have been obvious to one skilled in the art to combine the teachings of Wennerberg with the turbine features of Cirrito, for the purpose of providing an optimum turbine heating source while using combustion gases to blow and remove drying gases from a web to be dried for efficient use of energy.

### ***Double Patenting***

Claims 1-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-20 of copending Application No. 10/591,393. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been an obvious matter of design choice to include the currently claimed vectors with the copending application, since both applications would perform the invention as claimed regardless of the recited vectors.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Response to Arguments***

Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other references cited with this action teach one or more features of the claimed invention, but are not relied upon in rejecting the claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth B. Rinehart can be reached on 571 272 4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. Gravini/  
Primary Examiner, Art Unit 3743